STS-113 POST LAUNCH FILM REVIEW
KSC Photo/Video Analysis Team
26 November 2002

ANOMALIES

A cold wall leak was observed on SSME #1 (ME-2050). The leak was located at approximately the 10 o'clock position in between hat band #9 and the aft manifold. Clip of SSME start-up at following link: http://www-launchops.ksc.nasa.gov/msdinfo/reports/STS113_Coldwall.mpeg

Photo 1. SSME #1 Cold wall leak

OBSERVATIONS

Several pieces of debris ejected from SRB exhaust hole at T-0, including large portion of RTV silicone from SRB HDP base-band. There was no contact with the vehicle. (E-1, E-4, E-57, E-60, E-62) The debris appears to have come from the base of HDP #3. (See photo #2) Clip showing debris ejected out of SRB exhaust hole:
http://www-launchops.ksc.nasa.gov/msd/reports/STS113_E1_HDP_RTV.mpg

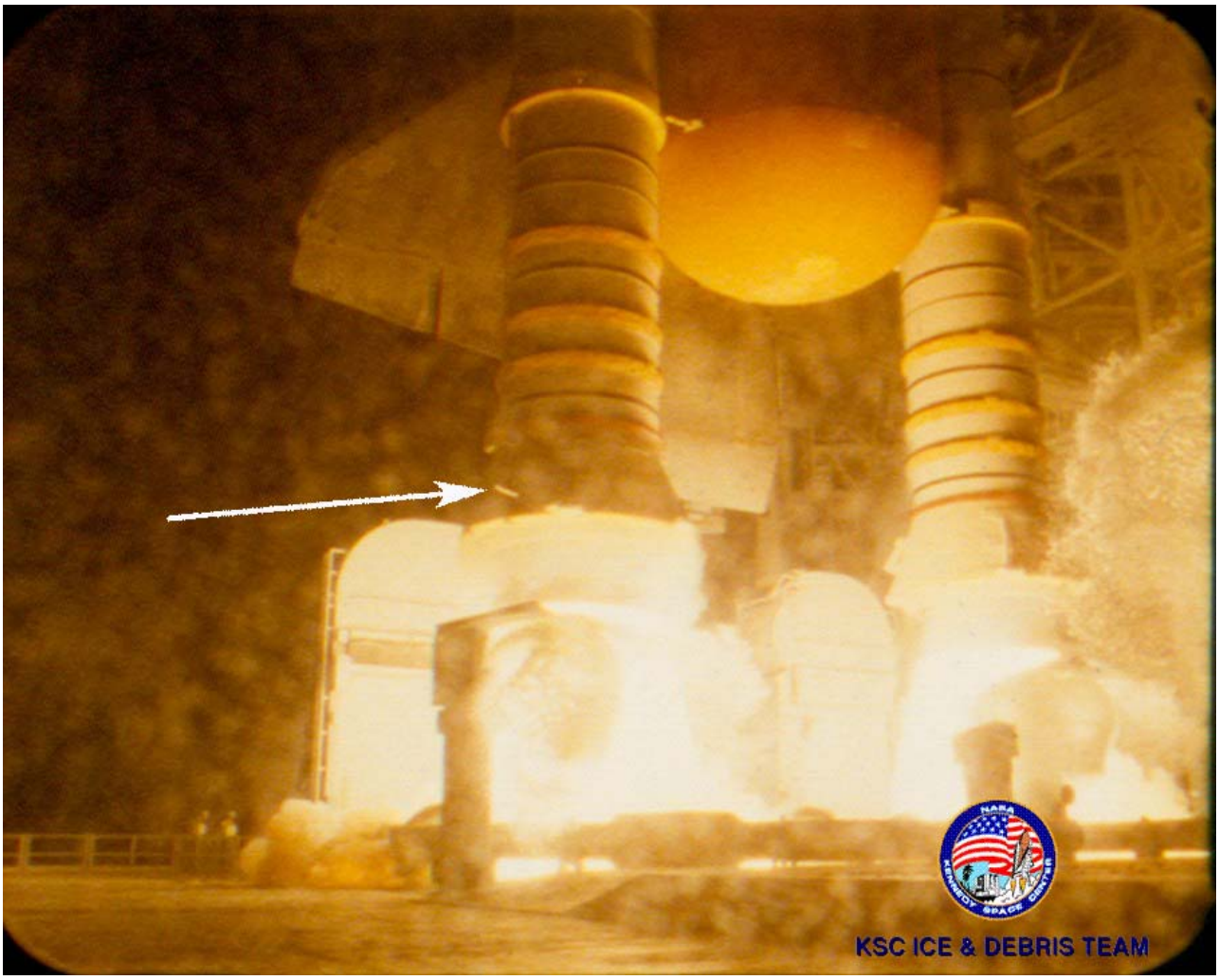

Photo 2. Photo 2. Film item E-1. Debris emanating from SRB exhaust hole.

Several pieces of ice from LO2 feedline bellows observed falling. No contact with Orbiter. (E-5, E-6)

Ice/frost from +Y ET longeron observed falling and striking the forward surface of the ET vertical strut TPS. No damage noted. (E-6)

GH2 vent line retraction appeared normal. (E-41, E-42)

No OMS pod flexing observed. (E-17, E-18)

Several tile surface chips were noted from base heat shield. This is a common occurrence due to SSME ignition acoustics.

Free-burning GH2 visible near vertical stabilizer during SSME ignition.

Several ice particles fell from ET/ORB umbilicals during SSME ignition.

Vapors on ET aft dome and SRB stiffener rings were observed after T-0.

Frost observed on +Z side of LO2 tank and –Z side of LH2 tank.

Ice particles fell from LH2 / LO2 TSM T-0 disconnects.

Slight rebound of LH2 TSM door was observed. (E-2, E-19)

T-0 umbilical access platform on the inboard side of the LO2 TSM moves slightly during SSME ignition. (E-17)

Small pieces of deck debris were blown across MLP deck during SSME and SRB ignition.

Numerous pieces of facility debris enter field of view after vehicle clears tower. (E-42)

NOTES

All high-speed film items have been reviewed.

No anomalies were observed in the films and videos that would be a concern for re-entry and landing.

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